

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
YELLOWSTONE PARK, WYO.

F THE SUPERINTENDENT

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FILE 143

MONTHLY REPORT

FOR
J U N E,
1920.

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MONTHLY REPORT,

1920.

June

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Attached also are original notes of Park Naturalist, Painter, Electrician, depths of snow in spring, and Weather Bureau.

HMA
CAL

July 10, 1920.

The Director,
National Park Service,
Department of the Interior,
Washington, D. C.

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Dear Sir:

The following is my report on conditions in the Yellowstone National Park, and on the operation of the park, for the month of June, 1920:

GENERAL CONDITIONS:

The mean temperature during June was 52, which was 4 degrees below normal. It was persistently cold during the first five days and the latter half of the month. The lowest temperature recorded was 24, on the 1st. The precipitation was 1.18 inches, which was .46 inch less than normal. The continued low temperature through both May and June resulted in backward spring conditions, and added materially to the difficulty and expense of clearing the high passes on the park roads of snow before the opening of the park season. The road over the Continental Divide between Upper Basin and Thumb, and from Thumb to Lake, which sometimes have to be cleared of snow, were open by June 13th, without any expense, the only work on this road required being the shoveling of one small drift by a party of tourists who wanted to get through before the season opened.

The road from headquarters to Lake via Norris and Canyon was opened in May, as previously reported. This work was done in May in order to give the Hotel and Camps Companies an opportunity to begin their extensive overhauling at the Lake in time so they could be prepared for guests at the opening of the season; and these companies, as well as concessioners C. A. Hamilton, George Whittaker, and J. E. Haynes, contributed to the fund to cover the cost of the work. A to-

tal of about \$1,000 was contributed to this fund by these concessioners. This work was completed to the Lake on May 28th, and the caterpillar tractor with steel snowplow mounted in front, which was used for this work, was left at Lake Outlet for later use on the divides, if necessary. It was decided to wait until about June 12th, so as to permit nature to do as much as possible towards removing the snow and still insure the opening of all passes by June 20th. Sylvan Pass, on the Cody or eastern entrance, presented the greatest difficulties; and I accordingly concentrated all efforts on this road. Rangers were sent over the pass every few days to measure and report the depth of drifts. Their reports the first of June were most discouraging so far as about a mile of the road in the pass was concerned, where the snow was reported from 10 to 30 feet deep; and on June 3rd I made a personal inspection of the road from the Cody side, clear through the pass. I then instructed a small road crew that was engaged in maintenance work on the Cody entrance road to experiment with blasting the drifts to loosen them up, and went to Cody and arranged with the citizens there to furnish cooperation in the work of removing the snow from Sylvan Pass, the work to begin on June 12th, with a crew working from both sides of the pass. On June 9th reports from rangers sent over the pass indicated considerable improvement in snow conditions from the June 3rd reports. By the 12th the crew that went out from Lake Outlet encountered but little difficulty in reaching the pass, where the huge drifts were encountered. We had a small crew at each end of the pass; and in addition the Cody people furnished \$500 to assist in this work, with which a crew of 20 men were hired. We succeeded in opening the pass by June 17th, three days before the tourist season; and by the 20th this road was in fair shape for regular travel.

No attempt was made to open the south entrance road before the snow disappeared, as it is not a main entrance, and the approach roads through Jackson Hole are in bad condition and the chances for travel via that entrance this year seem very slim. The first automobile came in from the south on June 24th, but they plowed through about two feet of snow for nearly three miles; and it was not until several days later that this road was pronounced perfectly safe for travel. Dunraven Pass was especially difficult to open as the drifts of snow were unusually frequent and deep, and it was not until

the end of June that the road was open, and not until July 1st that regular travel between Canyon and Mammoth was routed through the pass. This completed the opening of all park roads and approaches, made on record time under unusual difficulties. The deep cuts made through the snow-drifts are still apparent, and have since the roads were opened for travel furnished novel entertainment for the tourists who stop and take pictures among the drifts, and have snowballing matches.

The Monthly Meteorological Summary furnished by the U. S. Weather Bureau is inclosed.

Travel.

As predicted before the season opened, travel to the park has been heavy since the very first day of the tourist season. As will be seen by the inclosed Chief Ranger's Monthly Travel Report for June, the total number of incoming passengers to the end of June was 7,187, against 6,580 to the same date for the season of 1919, an increase of more than eight per cent. This percentage has increased steadily since June 30th to the date of this report, and the prospects now seem excellent for a banner season. Attached to the inclosed Chief Ranger's Travel Report is a table showing the number of private automobiles entering from different states and the number of tourists from each state traveling in these cars. The most of the increase is in travel to the park by rail; the travel by private automobiles is today approximately the same as last year. There was considerable travel in private conveyances to the park in June, before the regular park season opened on the 20th. The Camps Company began to take in tourists on June 8th, and others were provided for in their own private camps.

Daily passenger service has been maintained by the Oregon Short Line Railroad to the western entrance; thrice daily passenger service by the Burlington Railroad to Cody, Wyoming, on the east; and twice daily service by the Northern Pacific to Gardiner, Montana, on the north, since June 20th. The first train into West Yellowstone arrived at the western entrance on time the morning of the 20th, with 205 park tourists. They were due to leave by stage for Upper Basin and Mammoth at 9:00 a.m., but due to lack of sufficient help or proper organization the first automobile stage did not leave West Yellowstone until 10:33 a.m., and it was 11:45 a.m. before the last one left the depot. This

difficulty was gradually remedied with additional assistance at the depot, and as the employees became accustomed to the work of booking and loading tourists. June 26th was a record day for the number of rail tourists for the season, 669 tourists coming by rail from the three entrances.

Labor and Supply Market.

With the increasing demand for labor of all kinds, on account of renewed spring activities, there has been a slight shortage of labor since about the middle of June. It has not, however, been necessary to increase the wage scale to overcome this shortage, and for the last day or two the situation has been somewhat relieved.

Food supplies are slightly lower in price than they have been, with a few exceptions. Potatoes and vegetables are still very high and hard to get. Hardware and plumbing supplies are high priced and very slow of delivery.

II. PERSONNEL:

Employees.

On June 1st there were 95 employees on duty under this office in the park, and on June 30th there were 213. Below is given a list of the number of employees serving under appointment, with a general statement of the kind of work performed by each class:

<u>No.</u>	<u>Class.</u>	<u>Kind of work performed.</u>
1	Asst. Engineer	Office engineering and in charge of road repair crews in vicinity of headquarters.
1	Blacksmith	General blacksmith work. Shoeing draft animals and ranger saddle horses, and overhauling tools and quipment.
6	Clerks	1 disbursing agent and purchasing clerk; 1 on orders, proposals

<u>No.</u>	<u>Class.</u>	<u>Kind of work performed.</u>
		and vouchers; 2 stenographers, files and revenues; 1 on payrolls and timekeeping; 1 on cost accounting.
1	Steward and Master of Transportation.	In charge of all transportation and of storehouses.
3	Electricians	1 in charge of power plant who operated and did necessary line work; 2 assistants who operated regular shifts including Sundays.
1	Buffalo Keeper	In charge of tame buffalo herd, feeding and caring for them.
2	Asst. Buffalo Keepers	Assisting buffalo keeper in caring for the buffalo herd.
6	Foremen	1 in charge of stables at headquarters; 1 in charge of engineering work; 1 in charge of work on crib of Elk Fork bridge and road in east forest reserve; 1 in charge of repairs to sprinkling system; 2 in charge of road maintenance and repair crews.
1	General Foreman	In charge of construction work.
1	Handyman	Worked in storehouse issuing supplies, and sorting over, moving, and straightening up storehouses; also helped handle supplies from railroad.
1	Lineman	In charge of telephone system; did emergency work and installed instruments.
1	Watchman	Watchman at headquarters. Made hourly patrols for fire at night, and cleaned up headquarters building. Worked daily including Sundays.

<u>No.</u>	<u>Class.</u>	<u>Kind of work performed.</u>
1	Master Mechanic	In charge of shops and opening <i>heavy</i> roads by clearing snow with cat- erpillar and snowplow. <i>machinery in</i> <i>the park</i>
1	Plumber	In charge of general plumbing at headquarters. <i>+ building new auto house</i>
1	Painter	Renovated quarters at headquarters, and painted signs and equipment for guidance of public in park. <i>+ placed</i> <i>new sign</i>
1	Telegraph Opera- tor	Sent and received Western Union telegrams; also put in regular shift as switchboard operator, seven days a week.
2	Telephone Opera- tors	Operated telephone switchboard.
1	Motorcycle Mechan- ic	Repaired motorcycles.
1	Laborer	Miscellaneous work at headquarters.
1	Chief Ranger	In charge of ranger force.
3	Asst. Chief Rangers	Assisting Chief Ranger. One in charge of southern district; 1 in charge of western district; and 1 with crew opening roads. <i>in charge of</i> <i>trail work</i>
6	1st Class Park Rangers	In charge of ranger stations, on duty in Chief Ranger's office, patrol duty in the park protect- ing wild animals, and repairing game fences; also directing traf- fic, formation patrols, etc.
16	Park Rangers	ditto.
31	Temporary Park Rangers	ditto. Also motorcycle patrols, checking automobiles, etc.

The above employees were on duty as stated, with the exception of time during which they were on leave of absence.

In addition to the regular employees listed above the following were employed temporarily:

	<u>On June 1st.</u>	<u>On June 30th.</u>
Mechanics	5	11
Teamsters	8	33
Laborers	14	35
Skilled laborers	11	32
Cooks		9
Waitress		1
	<u>38</u>	<u>121</u>

Leaves of absence.

During June annual leaves of absence were granted as follows:

B. L. Reese	Park Ranger	1st	to 11th, 10 days.
A. L. McLaughlin	ditto	1st	3rd, 3 "
Ford Purdy	"	1st	1st, 1 day.
E. S. Bowman	"	1st	6th, 5 days.
Harry Trischman	Asst. Chf. Pk. Ranger	3rd	to 4th (noon) 1½ "
C. O. Lauer	Clerk	5th	5th, 1 day.
R. L. Shultz	Tel. S.B. Opr.	1st	17th, 15 days.
G. T. Dustman	Park Ranger	4th (noon)	to 6th, 1½ "
R. V. Harr	ditto	14th	to 15th, 2 "
F. E. Bregdon	Asst. Electrician	14th	20th, 6 "
E. A. Allan	Lineman	15th	19th, 5 "
C. A. Lindsley	Asst. Supt.	19th	20th, 1 day.
B. C. Lacombe	Buffalo Keeper	19th	20th, 1 "
F. B. Richards	Park Ranger	27th	30th, 3 days.
W. H. Pendell	Storehouse Clerk	27th	30th, 3 "

Appointments.

June 10: Sam H. Hurless, park ranger, \$100 p.m. T.
 10: Calvin O. Davis, park ranger, \$1200 p.a.
 13: Russell Sprinkel, park ranger, \$80 p.m. T.
 13: Wendell M. Bishop, park ranger, \$100 p.m. T.
 16: Oze Van Wyck, Jr., park ranger, \$80 p.m. T.
 16: Vernon S. Downs, park ranger, \$80 p.m. T.
 16: Ray D. Teesdale, park ranger, \$80 p.m. T.
 16: Lew Sarett, park ranger, \$80 p.m. T.
 16: Edgar E. Randolph, park ranger, \$80 p.m. T.
 16: Leon D. Mink, park ranger, \$80 p.m. T.

June 16: Robert A. Ide, park ranger, \$80 p.m. T.
 16: Guy W. Grove, park ranger, \$80 p.m. T.
 16: Lessing L. Engelking, park ranger, \$80 p.m. T.
 16: Louis Druskin, park ranger, \$100 p.m. T.
 16: Roger C. Goode, park ranger, \$100 p.m. T.
 16: William C. Troutman, park ranger, \$100 p.m. T.
 16: Nelson J. Howard, park ranger, \$100 p.m. T.
 16: Frank J. Parsch, park ranger, \$80 p.m. T.
 20: Henry Ravenal, park ranger, \$80 p.m. T.
 16: Dean Hauseman, park ranger, \$1200 p.a. WAE.
 16: Hollis N. Matthew, park ranger, \$1200 p.a. WAE.
 16: Emmet S. Matthew, park ranger, \$1200 p.a. WAE.
 16: John L. Tyler, park ranger, \$1200 p.a. WAE.
 17: Clyde E. Roney, park ranger, \$1200 p.a. WAE.
 16: William H. Harrison, park ranger, \$1200 p.a. WAE.
 16: Charles H. Watkins, park ranger, \$1200 p.a. WAE.
 16: L. Dow Nichol, Jr., park ranger, \$1200 p.a. WAE.
 21: Tom Meek, park ranger, \$80 p.m. T.
 24: Alexander C. Wiley, clerk, \$1360 p.a.
 15: Jack H. Harvey, motorcycle mechanic, \$120 p.m. T.
 15: Hans Larsen, park ranger, \$80 p.m. T.
 24: Sam T. Woodring, park ranger, \$1200 p.a.
 17: W. B. Holmes, park ranger, \$80 p.m. T.
 25: Frederick C. Fishback, park ranger, \$80 p.m. T.
 19: Wendell S. Keate, park ranger, \$80 p.m. T.
 16: Luther Custer, park ranger, \$80 p.m. T.
 15: Elizabeth B. Allan, Tel. Opr., 35¢ per hour, T.

Separations.

June 8: John L. Cooper, motorcycle mechanic, \$120 p.m.
 11: Bert L. Reese, park ranger, \$1200 p.a.
 30: Frank B. Richards, park ranger, \$1200 p.a.
 30: E. S. Copenhaver, Asst. Buffalo Keeper, \$900 p.a.

III. WORK COMPLETED:

(a) Construction of Physical Improvements.

No work under this heading was completed during
 June.

(b) Maintenance and Repair of Physical Improvements.

The gas storage tank at Gardiner has been erected and placed on the concrete foundation, and is complete with the exception of the pipe connections.

The small slides of dirt in the Gardiner Canyon were removed, and the road put in fair condition. All roads have been opened up for traffic, the snow re-

moved and light grader and repair work done, with the exception of the Cooke City road, Mt. Washburn, Gallatin, Dunraven Pass, and the south entrance and forest roads. Only light repairs and general maintenance work was done.

The sprinkler tanks throughout the park have been repaired, but many of them still need constant attention to keep them operating.

The general condition of the roads is fair for this time of the season, but much maintenance work and repairs still remain to be done. The sprinkler crews in most places have been sent out to their stations and will be sprinkling the first of July.

(c) Miscellaneous Improvement Work.

The 45-acre meadow near the northern entrance was irrigated by one man throughout the month. It also became necessary to "clip" the field with a mower, to check an apparently heavy crop of fanweed and other weeds which have made an appearance with the sprouting of the grass seed.

The lower meadows at the buffalo farm were also irrigated during the month, and the fences around this meadow were repaired.

The water system to supply the public automobile camp at Mammoth was completed. This was partially done last year, and required but little work to finish it.

(d) Service to the Public.

While the regular park season did not open until June 20th, most of the roads were opened to points of interest and it was found desirable to begin the sale of automobile tickets of passage to private parties on June 10th. The inclosed Chief Ranger's Travel Report shows that during the month 7,187 people visited the park, of which 3,555 furnished their own transportation, and 3,632 came with hired transportation. There were 1,025 motor vehicles entering the park with 3,416 passengers. Of this number 990 were paid automobiles, 15 were motorcycles, 8 were complimentary cars, and 10 were cars entering the park a second time. Tourist travel by rail-

road has exceeded that of any other June, and on the 26th of the month the transportation company received 669 tourists, which number exceeds any other single day in the history of the company.

It is a noticeable fact that only a small percentage of the visitors entering the park in their own cars stop at the hotels and camps, the majority preferring to camp out with their own outfits.

Of the number touring the park with the Yellowstone Park Transportation Company, 2,200 stopped at the hotels and 1,424 stopped at the permanent camps.

An information bureau was maintained at headquarters. A total of 694 inquirers visited the information bureau during the last eleven days of June. Thirty-one of these visitors asked specifically for the museum; virtually all of them were interested in the few specimens for which there is room in the office, and spent considerable time viewing them and asking questions. This is a trifle over an average of 63 inquirers a day, and at times our little office was quite crowded, as we had previously anticipated but could not help.

A total of 146 pamphlets and 15 maps were sold. A series of monthly bulletins on flowers, geology, animals, and birds was prepared and placed at all ranger stations, camps, hotels, and stores at the beginning of the season. A total of 136 bulletins was so placed in sets of fours, and they have attracted a great deal of interest and discussion from the very start.

One ranger was on duty with the tame buffalo show herd at headquarters constantly, and it is estimated that about 3,000 tourists visited the buffalo corral during June.

IV. WORK IN PROGRESS:

(a) Construction of Physical Improvements.

The construction of an adequate water system for supplying private parties traveling through the park in their own automobiles was commenced at Grand Canyon on June 4th, and was nearly completed by the end of the month.

This system consists of a pipe line from Canyon Hotel to the public automobile camp near Canyon Junction, with branches to the ranger station and the general store of George Whittaker.

Mr. Harris, of Perham and Harris, called on June 10th relative to the firm's contract for construction of an underpass bridge in Sylvan Pass, but due to large amount of snow on the road it was decided that it would be impossible to complete the work during the month of June; and he was advised to apply for an extension of time on this work, which he has done.

(b) Maintenance and Repair of Physical Improvements.

Our shop force was engaged during the month in repairing and overhauling tools and equipment, including trucks, automobiles and motorcycles. Mr. Howard Campbell, an expert on motorcycles, representing the Harley-Davidson Motorcycle Company, spent the period June 15th to 22nd in our motorcycle shops, instructing the mechanic and riders as to care and use of the machines used for road patrols, resulting in our motorcycles being in better condition for the season's work than they have ever been before.

The plumber did a little work that was absolutely necessary at headquarters to keep the water system up, but most of his time was devoted to the new construction work at the Canyon.

The painter specialized on painting signs for posting throughout the park for the information and guidance of the public, and getting the signs in place. Excellent progress was made on this most important work, but this is a job that will require most of the summer to complete, as in addition to several hundred signs that were on hand waiting to be put up there are many more badly needed. An assistant was detailed for the painter throughout the month, and when he was out in the park placing signs a truck and driver were also in use for this work.

The hydro-electric power plant was run 19 hours per day up to the middle of the month, and 24 hours per day since that time. A total of 11,280 kilowatt

hours of current per day was generated. Of this, 3,359 K.W.H. were consumed by concessioners, 658 for the lighting of the grounds at headquarters, and 7,263 by Government shops, buildings, and employees. The peak load for the month was 52 K.W. In addition to running the power plant, the electricians made necessary repairs to the lines and wiring in buildings and grounds, and looked after the headgates, ditches, and pipe lines. Due to high water and danger of damage to the headgates, it was necessary to employ one man most of the time during June to keep the gravel and rocks away from the headgates and keep the water flowing into the pipe lines at proper level.

The telephone lineman had one assistant during the month, and beginning June 8th was out in the park most of the time making general spring repairs to the lines. These repairs consisted in resetting poles, replacing brackets and insulators, repairing breaks, and removing crosses with the hotel line. In all, about 17 poles were reset.

One man and team was kept busy during the month improving and irrigating the meadows on Slough Creek, so as to raise an increased supply of hay.

(c) Miscellaneous Improvement Work.

General cleaning up of the grounds at headquarters, and the watering and care of the lawns, required the services of two to four men during the month. These men with the assistance of the headquarters barn force also kept the public camp at Mammoth cleaned up and supplied with wood.

Improvements by concessioners.

The Yellowstone Park Camps Company finished the construction of new tents at Mammoth Camp and built and installed plumbing in the toilets. The concrete plunge, with pipe leading from a hot spring, was completed and opened for use, but was closed again after a few days' trial until suitable dressing rooms could be completed. These are now in process of construction and will be ready for use at an early date. The balance of the new work planned for Mammoth Camp will have to be left until after the close of the tourist season, as the camp is too full of tourists to permit of much construction work going on.

The Camps Company also resumed its work of construction of a new camp at Lake Outlet, and made excellent progress. While they were not far enough along with this project on June 20th to furnish accommodations for all tourists and it was necessary for them to send some of them on past the Lake to Canyon for the night, this condition was unavoidable, due to the fact that the roads were not opened early enough to get the work started in time, and it lasted but a few days and only a few complaints were filed by tourists. The work of constructing Camp Roosevelt was also resumed and is still in progress. A few tourists were accommodated at this camp during June, the kitchen and dining room service being in tents as the main building was not completed.

The Yellowstone Park Transportation Company employed a large shop force at Mammoth garage, and also completed the remodeling of its bunk house at Mammoth. Construction of a new gas filling station at Mammoth was also commenced.

The Yellowstone Park Hotel Company began the work of building a new port cochere at Lake Hotel. They also constructed a temporary addition with canvas roof to the dining room at Old Faithful Inn at Upper Basin, providing an additional capacity of 125 to the main dining room, necessary to accommodate the increased travel.

J. E. Haynes continued work on his new picture shop at Mammoth, and it is nearly completed.

C. A. Hamilton continued work on his new store building at Lake Outlet, and also established a store at Thumb, under special permit issued him, using some of the old hotel buildings already located there.

V. WORK BEGUN:

The new work begun during the month consisted of the construction of the new public camp at Canyon, and the building of gas filling stations at Mammoth and Upper Basin, mentioned under a preceding paragraph.

VI. PLANS OR PROPOSED WORK:

It is proposed to complete the widening and the fills over the concrete culverts in Dunraven Pass as soon as the maintenance work is far enough along to permit safe travel through the pass.

The new road around the Lake Hotel, and the two miles of road between the two, and four-mile posts on the Lake to Canyon road will be graveled as soon as the crew can be outfitted from headquarters.

There are a number of bridges which need re-decking, and this will be attended to as soon as lumber is available.

Arrangements are being made to take up about 200 additional acres of land for meadows at the Buffalo Farm, on the opposite side of Lamar River from the mouth of Rose Creek. This land will have to be plowed, harrowed, leveled and seeded to grass; and the expense will probably be \$3,000 or \$4,000 for the work and seed.

The fence around the upper pasture at the present buffalo farm will have to be generally overhauled.

A crew of about a dozen men will have to be employed for heavy repairs to some of the telephone lines. The line from Dunraven Pass to Tower Falls has not been used for several years and will require a lot of work. Over a mile of the poles between the Buffalo Farm and Tower Falls, along the Lamar River, were washed out by high water and have to be replaced.

Four or five small crews will be put into the field, under the direction of Assistant Chief Ranger Harry Trischman, to clear out trails that are used by tourist parties and by our pack trains for fire patrols and supplying snowshoe cabins. About 500 miles of trail will probably have to be cleared out. One of these crews may also build new trails from Lamar River to Cold Creek, about 8 miles; from Turbid Lake to the east boundary, 17 miles; and from Eagle Creek down Mountain Creek to Yellowstone River, about 12 miles. It is contemplated having the trail crew that builds the Cold Creek trail also build a new snowshoe cabin at Cold Creek, at a cost of about \$500.

Examination of the elk range on the Buffalo Fork southeast of the park by a representative of this office, in cooperation with a representative of the Biological Survey and the U. S. Forest Service.

VII. POLICIES:

No new policies were adopted during the month.

VIII. COST OF OPERATION:

Cost report for month of June is not yet completed, but will be forwarded as soon as practicable.

IX. OTHER MATTERS OF INTEREST:

Wild Animals.

In general the conditions for wild animals during June were excellent, and grass eating animals had no difficulty in finding an abundance of food everywhere.

Buffalo, tame herd: This herd was grazed on the range on Specimen Ridge and in the foothills near Mt. Norris. A total of 54 calves have been born in the herd this spring. Three bulls were shipped during June to city parks as follows:

To Mr. Conrad B. Wolf, Superintendent of the Board of Park Commissioners, Hibbing, Minnesota, one five-year-old bull, on June 30th.

To State of Wyoming, Thermopolis, Wyoming, one three-year-old bull, on June 30th. Carl Downing, Deputy State Game Warden of Wyoming, from Cody, Wyoming, came in on June 26th and attended to this shipment.

To Mr. Paul Biersach, President of Park Zoological Society, Milwaukee, Wisconsin, on June 30th.

On June 18th fifteen bulls from the tame herd were brought in to Mammoth Hot Springs for show purposes. A great many tourists visit the show herd daily.

Buffalo, wild herd: It is evident that the wild buffalo herd is increasing, for some of the animals have left the old feeding grounds and have been seen in other sections of the park. Chief Ranger McBride seems to think that the reason for migration to other sections

is on account of an increase in the herd, resulting in the need of a new pasture. I saw eight wild buffalo near Turbid Lake on the east road early in June, and the next day Engineer L. L. Hill saw fifteen in the same locality.

Bears: Bears do not seem to be as numerous around the hotel garbage dumps as in previous years, much to the tourists' disappointment.

Doctor S. T. Pope, of San Francisco, California, his brother, and some of their friends, with Ned Frost of Cody, Wyoming, as a guide, were in the park during the month for the purpose of securing specimens of Grizzly bears for the California Academy of Sciences. Bows and arrows were used to some extent to kill the specimens desired.

Antelope: The antelope are all back to their summer range, and are seldom seen by visitors. Rangers report them to be in excellent condition.

Deer: Most of the deer have gone back for the summer, but a few remain around the camps and hotels; and nearly everyone touring the park are fortunate enough to see deer somewhere on their trip.

Elk: Quite a number of elk remained on the grounds at headquarters up to the middle of June. Small herds are seen often by tourists in the upper park. The elk are all in excellent condition, and a few calves have been reported. The prospects for a reasonably good crop of calves seem excellent.

Mountain sheep: A few sheep were reported by rangers during the month, in excellent condition. Tourists are not likely to see them on their trips, though they are occasionally seen on Mt. Washburn.

Moose: An occasional moose was seen during the month, by rangers on patrols. They are in good condition.

Carnivora: On June 5th Rangers Dupuis and Dewing located a coyote's den near the old coal mine on Mt. Everts, and succeeded in killing the coyote and five pups.

Grazing: The cool weather of both May and June (average 4 degrees colder than normal for those months) and con-

sequent slow melting of the snow, was conducive to luxuriant growth of grass; accordingly forage for our animals is very plentiful in all parts of the park. The number of domestic animals grazed on park lands was comparatively small. The Camps Company saddle horses (about 33) and about 23 belonging to the Yellowstone Park Transportation Company, also about 30 of our surplus saddle and pack horses, were out on grass until about the middle of June, but had to be taken up and put in service as soon as the season opened. The Hotel Company brought in 90 cows and calves on June 17th, and graze them near Canyon Hotel on the Mt. Washburn road, to furnish the milk supply for Canyon and Lake Hotels. They also were permitted to bring in 36 cows on June 28th, which are grazed near Fountain Hotel for supplying the Old Faithful Inn with milk.

In addition to these, we have about 175 horses working in the park on maintenance work, which are grazed to a slight extent about the road camps; but they have to be kept up for work and their main ration is oats and hay purchased outside of the park.

Birds.

Many summer birds were in evidence throughout the park. Additional notes on birds will be found further on in this report, under notes furnished by Park Naturalist Skinner on "seasonal changes".

Fishes.

Water was high in most of the streams early in the month, but towards the end of the month the fishing began to get good, and was participated in to a considerable extent by tourists who cared for it. It was especially good at the outlet of Yellowstone Lake, where those so disposed were usually able to catch their limit, either from boats or fishing directly from the bridge on the Cody road.

The crew of men sent from the United States Fish Hatchery at Bozeman for work in the park arrived on June 10th and took up the usual summer work of gathering and eyeing eggs of the Blackspotted trout at the sub-hatchery at Yellowstone Lake Outlet. Another man was sent in from the Bozeman hatchery on June 14th, and established at Soda Butte Lake near the Cooke road in the northeast corner of the park to gather the crop at that point. He completed this work on July 2nd and left Soda Butte. Report of the number of eggs secured there

has not yet been received. The quality of the trout and the eggs at that point are especially good.

The Bozeman hatchery also furnished 20,000 eggs of Eastern Brook Trout on June 9th, which were planted by our ranger force the same day, 10,000 in Glen Creek and 10,000 in Obsidian Creek near the nine-mile post.

Seasonal Changes.

Botanical: This month has been noted for the wonderful growth of flowers, both in the quantity and in the quality of the single specimens. The masses of flowers in bloom throughout the park have been much larger than usual. Below the 6,000 foot level the following began to bloom: rock roses on the third, iris on the eleventh, bitter root on the fifteenth. In the neighborhood of Mammoth, larkspur were abundant throughout the month, forget-me-nots appeared on the tenth, lungworth and blue violets on the twelfth, wild flax and penstemon on the sixteenth, purple asters on the seventeenth, wild geraniums on the twentieth, Indian paint brush on the twenty-seventh, large beard tongue on the thirtieth. Service berry bushes were covered with blossoms and very showy on the sixteenth and elderberries just two weeks later. On the park plateau dog tooth violets and snap dragons appeared about the third, clematis on the twelfth, fringed gentian on the twenty-fourth, and lupines on the twenty-eighth.

Birds: As usual, the pine siskins appeared when the first dandelion seeds formed on the tenth; soon the great numbers of dandelions attracted about four times as many of these small birds as we ever had before. Of the migratory birds only four delayed their arrival until after June 1st, the night hawk arriving on the twelfth, the western wood pewee on the sixteenth, the lazuli bunting on the

seventeenth, and the western tanager on the tenth.

A killdeer nest was found near the Mud Volcano and the eggs hatched on the fourth. Robins and flickers began laying eggs in nests near Old Faithful during the first week of June. The first young osprey hatched on Eagle Nest Rock in the Gardiner Canyon on the fourteenth and others appeared the same week in Yellowstone Canyon. The brood of goslings on Lava Creek beaver pond hatched about the middle of the month. A magpie nest was found on the twenty-second, with young fully feathered and about to leave the nest just above the Buffalo Farm (this was the first occupied nest I have located within the park boundaries). Robins at Mammoth hatched out on the thirteenth and left the nest on the twenty-eighth.

Animals:

Elk: Horns continued to grow throughout the month; they were about one-third grown at the end of the month. The first calf appeared on the third, and more continue to arrive until on the twelfth fifteen per cent of all elk seen were new-born calves. Elk were crossing the Lamar River and working up the heights above the Buffalo Farm on the thirteenth. No elk in Hayden Valley at the beginning of the month but they began to reach that range about the middle of the month.
Mule deer: Horns were about one-half grown at the end of the month.
Porcupine: Numerous and feeding on the fresh, young meadow grass near Bridge Bay.
Coyote: 3 pups killed on the fourth were about three weeks old.

As was to be expected, seasonal changes are about normal at the end of the month, although the snow-drifts above 8,500 feet were heavier than usual.

Arrests and Violations of Law.

About 11:00 o'clock a.m., June 25th, the bungalow at the Hotel Company's garden on the road between headquarters and the northern entrance was forcibly entered,

and personal property valued at about \$175 stolen. The two Chinamen who run the garden were out in the field at work at the time, and had their front door, which faces the garden, securely locked. The thieves entered through a rear window on the opposite side from the garden. They could easily approach from this side without being observed, as the brush is thick close to the house on that side. When they returned at noon they at once reported their loss, and every effort was made to find the thieves, but without success. Tracks and other evidence indicated the work was done by boys or young men. All suspicious characters were watched, and a band of gypsies who happened along next day were put out of the park; but no clue has been found to this robbery.

Following is a list of arrests made by members of the ranger force during the month:

<u>DATE.</u>	<u>NAME.</u>	<u>OFFENSE.</u>	<u>PUNISHMENT.</u>	<u>BY RANGER</u>
June 24th	M. McCoy	Speeding.	Reprimand by Asst. Supt.	John L. Tyler
27th	Dr. E. W. Timm)	Defacing	Reprimand by	
	Mr. F. X. Zeck)	formation.	Judge Meldrum.	Chas. Smith
28th	F. J. Erdman	Molesting	Reprimand by Supt.	Geo. Dustman
		U. S. property.	& charged for repairs.	
30th	A. C. Green)	Defacing		
	W. C. Terry)		Fined \$10 and	Chas. Smith
	D. E. McLendon)	formation.	costs.	
30th	A. B. Strode	Violating	Fined \$5 and	Geo. Dustman
		fishing re-	costs.	
		gulations.		

Forest Fires.

Fire patrols were maintained when necessary, but an abundance of rain and melting snow throughout the month rendered them unnecessary in most cases.

Accidents and Casualties.

Mr. Jake Miller, Sr., of Phoenix, Arizona, died of heart failure near the top of Sylvan Pass on June 30, 1920. He and his son, Jake Miller, Jr., were making the trip through the park in a Ford car and as the car was not pulling very well, in going up the grade, in Sylvan Pass, Mr. Miller, Sr., decided to walk, his son going

ahead with the car. When the young man had gone about two hundred yards, he looked back and saw his father lying in the road. The old man was dead when the son reached him. The young man managed to get the body of his father in the car and returned to the Sylvan Pass Ranger Station. Mr. J. H. Vogel, an undertaker of Cody, Wyoming, took charge of the body. Dr. Howe of Cody, Wyoming, examined it, and reported that death was due to fatty degeneration of the heart. Mr. Miller was 70 years of age and very fleshy, weighing about 215 pounds.

Natural Phenomena.

Old Faithful Geyser continued to play stronger than last year, and at intervals of about 64 minutes, which is also more frequent. The activity of the geysers at Norris Geyser Basin is less than last year, in general.

Special Visitors.

Assistant Director Cammerer visited the park officially June 14th to 15th, but was unable to go into the park except to headquarters and vicinity, on account of limited time.

Other special visitors were noted as follows:

James Hazen Hyde and Dr. Lambert,)
Newcomb Carlton, Pres., Western Union) June 30th.
Mrs. Robert C. Morris, June 29th to July 2nd,
enroute to Slough Cr.

W. T. Thompson, June 23rd to 26th.

G. E. Goodwin, Acting Supt., Glacier Park,
June 26th to 27th.

Edward E. Britton, Pct. Sec., Sec. of the Navy,
June 15th to 19th.

Congressman F. C. Hicks, via Cody June 22nd to
July 1st.

J. M. Hannaford, Pres. of the N.P.R.R., June 12th
to 13th.

Howard Eaton, June 12th.

Lester L. Bryan, assistant to District Engineer
Paulsen in charge of water investigations U.S.G.S., Idaho

District, last of June, checking water gages. Entered with his own car from west side, and left via southern entrance.

Motion Pictures.

No motion picture representatives were recorded during the month.

One gentleman traveling for pleasure only was permitted to use his small motion picture camera without the formality of a special permit, on his representation that he was taking pictures for his own private collection only, and did not intend to use them commercially in any sense.

Miscellaneous.

Entertainments: Free motion picture shows were held weekly in the Post Exchange auditorium under a cooperative arrangement between the park employees and the residents of Gardiner, until the opening of the park tourist season, when this entertainment feature was taken over by the Park Curio Shop and a charge of 50¢ plus war tax was made at the door. Motion pictures are held once a week, and dances three times a week.

Religious services are held every Sunday, morning and evening, in the chapel at headquarters, by Rev. J. F. Pritchard, Episcopal Missionary of Montana. Visiting clergy are invited to hold services of any denomination if they so desire, but they seldom care to do so.

Copies of Office Circulars Nos. 4 to 19, inclusive, issued for information and guidance of employees, are inclosed for your information; also copies of articles for newspaper publication that have emanated from this office during June.

There are also inclosed copies of Notes on Flowers, Notes on Geology, Notes on Animals, and Notes on Birds, separate sheets of which are prepared on these items at the beginning of each month and posted at hotels, camps, public camps, and other public places for the information of the public. These were prepared by Mr. M. P. Skinner, Park Naturalist, and are found to

be intensely interesting to a large number of tourists and employees in the park.

X. RECEIPTS AND REMITTANCES.

The usual report of monies due, collected, and transmitted, together with money orders covering collections, will be submitted in a day or two.

Cordially yours,

Horace M. Albright,

Incls.

Superintendent.

ACW

CAL:ACW

1 July 1920.

REPORT ON INFORMATION SERVICE.

To: Chester A. Lindsley, Assistant Superintendent.

From: M. P. Skinner, Park Naturalist.

A total of 694 inquirers visited the Information Bureau during the eleven days of June. Thirty one of these visitors asked specifically for the museum; virtually all of them were interested in the few specimens for which there is room in the office and spent considerable time viewing them and asking questions.

This is a trifle over an average of 63 inquirers a day and at times our little office was quite crowded, as we had already anticipated but could not help.

A total of 146 pamphlets and 15 maps were sold.

A series of monthly bulletins on Flowers, Geology, Animals and Birds, was prepared and placed at all Ranger Stations, camps, hotels and stores, at the beginning of the season. A total of 136 bulletins was so placed in sets of fours and they have attracted a great deal of interest and discussion from the very start.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

THE SUPERINTENDENT

July 1, 1920.

REPORT on seasonal changes.

To: Chester A. Lindsley, Asst. Supt.

From: M.P. Skinner, Park Naturalist.

Botanical: This month has been noted for the wonderful growth of flowers, both in the quantity and in the quality of the single specimens. The masses of flowers in bloom thruout the Park have been much larger than usual.

Below the 6000 foot level, the following began to bloom: rock roses on the third, iris on the eleventh, bitter root on the fifteenth. In the neighborhood of Mammoth, larkspur were abundant thruout the month, forget-me-nots appeared on the tenth, lungworth and blue violets on the twelfth, wild flax and penstemon on the sixteenth, purple asters on the seventeenth, wild geraniums on the twentieth, Indian paint brush on the twenty-seventh, large beard tongue on the thirtieth. Service berry bushes were covered with blossoms and very showy on the sixteenth and elderberries just two weeks later.

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Coyote: 3 pups killed on the fourth were about three weeks old.

As was to be expected, seasonal changes are about normal at the end of the month, altho the snowdrifts above 8500 feet were heavier than usual.

National Park Service,
Yellowstone National Park.
July 1, 1920.

Inter report for work done during month of
June, 1920.

1, 2, 3, 4, 5. Worked on water wagons,
for ranger stations, and milking faint.

7, 8, 9, 10, 11, 12. Worked on Ranger
in and stop signs. Also placed Ranger
sign at Gardiner, (N.E.) and sign
at Mammoth Junction.

14 Prepared for trip into park to place

15, 16, 17, 18, 19, 20, 21, 22. Placed Ranger
in signs, Stop signs, one historical sign,
posts between Lake and Canyon Junctions,
Danger, Sound horn, Bad turn signs, be-
tween Lake Junction and Mammoth Hot Springs.

23, 24, 25, 26, 27. Worked on No Loafing, Keep
Public auto camp, and Junction signs.

28, 29, 30. Worked on Junction signs.

A. C. Neumann.

June 30 1920

Monthly report of Electric Power production
for month ended June 30 - 1920.

Total Generated.	11280 K.W.H.
Consumed by Concessioners.	3369 " " "
Consumed by Street Lighting.	658 " " "
Consumed by Government Buildings shops and lines	7263 " " "
Peak load for month	52 K.W.

Geo. P. Younger,
Electrician.

3:00 P.M., June 3, 1920.

Mr. Albright at East Entrance, just returned from inspection of Sylvan Pass.

White will be on telephone line tonight at 6:30 and he wants L.L.Hill to talk with him.

Mr. Albright will go over situation with White this P.M. on his way to Cody.

He wants to consider advisability of trying to blast snow in some places in the Pass.

Thinks it advisable to decrease size of White's crew by about half tomorrow.

Wants to plan to have snow crews for East Entrance ready to hit it by the 12th. White and crew of 10 or 12 men from East, supplemented by ten or twenty he hopes to induce Cody people to furnish. Crew of ten or twelve from Lake side with Harry Trischman. Doesn't think Bill Anderson will be necessary as Harry is familiar with work now. Wants plans made well in advance for this work.

Mr. Albright will be in Billings tomorrow, and back here Saturday unless he decides to go to Glacier Park, in which case it will be the 9th or 10th before he returns here. Will let us know if he goes to Glacier Park.

CAL

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

6:00 P.M., June 9, 1920.

CE OF THE SUPERINTENDENT

MEMO. DEPTH SNOW LAKE JUUNCTION TO EASTERN ENTRANCE, WINESS.

Lake Juntion to 9-mi. post, dry and dusty.

9-12 mile posts snow only in occasional patches. No consequence.

At 12-mi. post, 150 feet 3-4 ft. deep.

12-13 mi. post, snow only in patches 1-2 feet deep.

at 13-mi. post, 100 yards 3-4 feet deep.

13-14 mi. posts 1-2 feet deep.

14-14 $\frac{1}{2}$ mi. posts 2 $\frac{1}{2}$ -3 ft.

14 $\frac{1}{2}$ -15 $\frac{1}{2}$ mi. posts 1 $\frac{1}{2}$ -2 ft. deep

15 $\frac{1}{2}$ -16 $\frac{1}{2}$ bare.

16 $\frac{1}{2}$ -17 1 $\frac{1}{2}$ ft.

17 to W. end Sylvan Lake, $\frac{3}{4}$ mile bare.

Along Sylvan Lake, two drifts each 30 ft. long. 4 ft. deep.

18-19 mi. posts 2 ft. deep except one drift 100 yards long, 6-8 ft. deep. S

19 mi. post to west end of pass, drift 200 yards long, 3 ft. deep.

West end of pass to top of pass, $\frac{3}{2}$ mile, 4 ft. deep with two drifts 6-8' deep.

Top of Pass, for 100 feet, 20-25 feet.

Top of Pass to top of S Hill, distance 300 yards, 15 feet of snow for 100 yards, balance bare.

Top of S hill to foot of S hill, 150 yards altogether, 5 feet, with 1 drift 30 ft. long about 10 feet deep.

Foot of S hill to underpass bridge, 300 yards, 3-4 feet., and small drift.

Bridge to 5-mile post, 2 miles, 1 $\frac{1}{2}$ -2 feet deep and 2 drifts 4'.

Balance to east entrance bare.

East end Pelican Bridge washed out and impassable. Winess suggests having crew take out about 20 2x12's that are by the fishing bridge, to make a temporary bridge across this break.

June 3, 1920.

MEMORANDUM OF SNOW DEPTHS EAST
ENTRANCE ROAD.

	DEPTH IN FEET	
East entrance to $4\frac{1}{2}$ miles	No snow to bother.	June 9 th
$4\frac{1}{2}$ mi. to 5 mi. - $\frac{1}{2}$ mile,.....	2	
5 mi. to $6\frac{1}{2}$ mi. - $1\frac{1}{2}$ miles,.....	3	2
East end of Sylvan Pass to Under Pass Bridge	6	
Under Pass Bridge to the S hill,.....	10 to 15	
At top of S hill is a drift 300 ft.long,....	15 - 20	
At top of pass is drift 100 ft.long,.....	25 - 30	20-25
Top of pass to West end Pass is, for $\frac{3}{4}$ mile,	10 - 15	4
West end Pass to East end Sylvan Lake,.....	4	
Along Sylvan Lake to $10\frac{1}{2}$ mile post,.....	3	2 drifts out
$10\frac{1}{2}$ mi. to $11\frac{1}{4}$ mi.,.....	No snow	
$11\frac{1}{4}$ to 14 miles - Cub Creek,.....	$3\frac{1}{2}$	
14 mi. to 15 mi.,.....	$3\frac{1}{2}$ to 4	
15 miles to 17 miles,.....	3	
17 miles to 18 miles,.....	2	
18 miles to 19 miles,.....	1	
Balance no snow to bother except two small drifts.		

Memorandum for Mr. Albright.

9:30 A.M. June 30, 1920.

Mr. Nichols phones he sent Harp and one of their best 10-passenger drivers to Canyon and in via Dunraven Pass late yesterday afternoon. Harp reports place about half way Canyon to Dunraven Pass unsafe for heavy cars; a rut that would take car over bank and to avoid rut car must be driven with one wheel on narrow shelf. Heavy rains last night, and Harp thinks trip entirely unsafe for their heavy cars today, though light cars might get through.

Says one bridge between Mammoth and Tower Falls bad shape, loose planks etc.

UNITED STATES DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
Yellowstone Park, Wyo.

July 2, 1920.

Weather Conditions---Mammoth Hot Springs.

J U N E , 1920.

Temperature: Monthly mean, 52.0° . Departure, -4.0° . The month was 7° colder than June, 1919 and 8° colder than that of 1918. It was persistently cold during the first five days and the latter half of the month. The temperature was slightly above normal only on ~~five~~ seven days during the month. The minimum temperature of 24° on the 1st, is the lowest temperature for June since 1901, when 20° were recorded.

Precipitation: Total 1.18 inches. Departure, -0.46 inch. Thunderstorms occurred on 11 days, or about 50% more than for the average June. Light hail fell for five minutes during the storm of the 16th, but no damage was done.

Snowfall: Total, 0.2 inch, which fell on the 1st.

Wind: Total movement, about normal. The maximum velocity of 38 miles from the southwest on the 10th, has been exceeded five times during the past 16 years.

Sunshine: Percentage of possible, 65; slightly above normal.

E. H. Fletcher,

Observer.